
UNIVERSITI SAINS MALAYSIA

First Semester Examination
2013/2014 Academic Session

December 2013 / January 2014

RQG 236 – Measurement 1
(Pengukuran Kuantiti 1)

Duration: 3 hours
(Masa: 3 jam)

Please check that this examination paper consists of FOURTEEN pages of printed material before you begin the examination.

Sila pastikan bahawa kertas peperiksaan ini mengandungi EMPAT BELAS muka surat yang tercetak sebelum anda memulakan peperiksaan ini.

Students are allowed to answer the questions either in English OR in Bahasa Malaysia only.

Pelajar dibenarkan menjawab semua soalan dalam Bahasa Inggeris ATAU Bahasa Malaysia.

Answer **ALL** questions.

Jawab **SEMUA** soalan.

In the event of any discrepancies, the English version shall be used.

[Sekiranya terdapat sebarang percanggahan pada soalan peperiksaan, versi Bahasa Inggeris hendaklah diguna pakai].

1. Take-off the quantities for doors of an apartment unit in accordance to the drawings no. RQG 236_2013/2014/ 1 OF 2 to 2 of 2.

NOTES:

Before fixing, all door leafs and timber works must be primed with one undercoat and two finishing coats of enamel paint.

All doors must be fixed with hinges and complete with lockset.

Ukurkan kuantiti untuk pintu rumah apartment berdasarkan kepada lukisan bertajuk no. lukisan RQG 236_2013/2014/ 1 OF 2 to 2 of 2.

NOTA:

Sebelum dipasang, semua daun pintu dan kerja-kerja kayu disapu dengan sapu lapisan bawah dan dua lapisan kemas atas menggunakan cat enamel.

Semua pintu dipasang dengan engsel dan lengkap dengan kekunci pintu.

(100 marks/markah)

2. With referring to Drawing TNB 1 and TNB 2, you are required to produce taking off for the external and internal brickwall.

Additional information:

- (a) No lintel for door and ventilation grille
- (b) Mesh reinforcement every 4th course of brickwall with expanded metal mesh reinforcement
- (c) 225mm DPC of single course hessian based bitumen felt for external brickwall
- (d) 115mm DPC of single course hessian based bitumen felt for internal brickwall
- (e) No stiffener for the internal brickwall

Merujuk kepada Lukisan TNB 1 dan TNB 2, anda diminta untuk menyiapkan pengukuran kuantiti (taking-off) untuk kerja-kerja dinding bata luaran dan dalaman.

Maklumat tambahan:

- (a) *Tiada lintel untuk pintu dan kisi-kisi pengudaraan*
- (b) *Tetulang jejaring pada dinding bata 'Mesh reinforcement every 4th course of brickwall with expanded metal mesh reinforcement'*
- (c) *Selapis lapisan kalis lembab pada dinding bata luaran pada ketebalan 225mm, jenis 'hessian based bitumen felt'*
- (d) *Selapis lapisan kalis lembab pada dinding bata dalaman pada ketebalan 115mm, jenis 'hessian based bitumen felt'*
- (e) *Tiada tiang pengukuh pada dinding bata dalaman*

(100 marks/markah)

3. Take-off the quantities for roof finishes (i.e. roof covering and insulation only) of the building in accordance to Drawings Roof-1 to Roof-5. Indicate the clauses in the SMM2 which you refer to in doing your measurement.

Ukurkan kuantiti untuk kemasan bumbung (iaitu penutup dan insulasi bumbung sahaja) bangunan berdasarkan lukisan bertajuk Drawings Roof-1 sehingga Roof-5. Nyatakan klausa dalam SMM2 yang anda rujuk dalam membuat pengukuran.

Specification/Spesifikasi:

1. Roof tiles: Monier 'Marseille' concrete cement interlocking roofing tiles in Natural Red colour.
2. Roof insulation: Coolmax M-Foil One CMF1 with 150 lap, laid above Gauge No 20 galvanised chicken wire netting of 38 mm x 38 mm mesh.
3. Valley gutters: 360 mm girth, four times bent, 100 mm soldered laps, made of galvanised steel sheets, 22 gauge.
4. Painting to valley gutters: Red oxide primer, one undercoat and two finishing coats of gloss paint.

(100 marks/markah)